

AMENDMENTS TO THE CLAIMS

1. (currently amended) A permanent seafloor seismic data acquisition apparatus, comprising:

a sensor block ~~deployable~~ deployed on a seafloor for gathering seismic information, the sensor block having a node architecture including;

a backbone;

a hub; and

one or more sensor modules, wherein the one or more sensor modules form one or more sensor lines, and wherein the one or more sensor lines being mated at the deployed location to form the hub, each of the sensor modules, sensor lines, hub and backbone forming a node of the apparatus and wherein the sensor block is expandable to vary a block size by adding one or more additional substantially similar nodes for accommodating a range survey areas using a substantially similar node architecture.

2. (original) The apparatus of claim 1, wherein the one or more sensor modules are disposed along a sensor line trenched to in the seafloor.

3. (original) The apparatus of claim 1, wherein the one or more sensor modules include a multi-axis accelerometer.

4. (original) The apparatus of claim 3, wherein the multi-axis accelerometer includes a 3-C accelerometer.

5. (original) The apparatus of claim 4, wherein the one or more sensor modules further comprise a hydrophone disposed in a housing for providing a 4-Component output signal from the one or more sensor modules.

6. (original) The apparatus of claim 1 further comprising a central recorder disposed at

a surface location and coupled to the backbone.

7. (original) The apparatus of claim 1 further comprising a cable including a wire conductor for transferring data from the one or more sensor modules to the backbone.

8. (original) The apparatus of claim 1 further comprising a cable including an optic fiber for transferring data from the one or more sensor modules to the backbone.

9. (original) The apparatus of claim 1, wherein the backbone, hub, and sensor modules are remotely deployable on the seafloor.

10. (original) The apparatus of claim 1 further comprising a remotely operated vehicle for deploying the backbone, hub, and sensor modules at the seafloor.

11. (currently amended) A system for seismic data acquisition comprising:
a surface controller controlling the system; and
a seafloor subsystem comprising sensor block deployable on a seafloor for gathering seismic information, the sensor block having a node architecture including;
a backbone in communication with the surface controller;
a hub; and
a one or more sensor modules, wherein the one or more sensor modules being mated at the deployed location to form one or more sensor lines, and wherein the one or more sensor lines form the hub, each of the sensor modules, sensor lines, hub and backbone forming a node of the apparatus and wherein the sensor block is expandable to vary a block size by adding one or more additional substantially similar nodes for accommodating a range survey areas using a substantially similar node architecture.

12. (original) The system of claim 11 further comprising an acoustic source for providing

acoustic energy, the acoustic energy being sensed by the sensor one or more modules.

13. (original) The system of claim **11** further comprising a wet connector to provide system scaling.

14. (original) The system of claim **11**, wherein the backbone comprises a plurality of hubs.

15. (original) The system of claim **11**, wherein the hub comprises at least two sensor lines, each sensor line having a plurality of sensor modules attached thereto.

16. (original) The system of claim **11**, wherein the one or more sensor modules include a multi-component sensor.

17. (original) The system of claim **11**, wherein the one or more sensor modules include a multi-component MEMS accelerometer.

18. (original) The system of claim **11**, wherein the one or more sensor modules further comprise a hydrophone in an underwater housing.

Claims 19 through 22 are cancelled.